The Clark County Portion of the State Implementation Plan to Meet the $PM_{2.5}$ SIP Requirements of the Clean Air Act Section 110(a)(2).

Clark County, Nevada

June 2015

Clark County Department of Air Quality
4701 W. Russell Road, Suite 200
Las Vegas, NV 89118

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ACRONYMS AND ABBREVIATIONS

Acronyms

AERR	Air Emissions Reporting Requirements
AQR	Clark County Air Quality Regulations
BCC	Clark County Board of County Commissioners
CAA	Clean Air Act
CFR	Code of Federal Regulations
CMAQ	Federal Congestion Mitigation and Air Quality
DAQ	Clark County Department of Air Quality
EPA	U.S. Environmental Protection Agency
I-SIP	Infrastructure State Implementation Plan
NAAQS	National Ambient Air Quality Standards
NAC	Nevada Administrative Code
NDEP	Nevada Division of Environmental Protection
NRS	Nevada Revised Statutes
NSR	New Source Review
SNRPC	Southern Nevada Regional Planning Coalition
PSD	Prevention of Significant Deterioration
QA	Quality Assurance
QC	Quality Control
SIP	State Implementation Plan
TAC	Technical Advisory Committee
RTC	Regional Transportation Commission

Abbreviations

$PM_{2.5}$	Particulate Matter less than 2.5 µg

Introduction and Background

Sections 110(a)(1) and (2) of the federal Clean Air Act (CAA), 42 U.S.C. § 7410(a)(1) and (2) hereafter referred to as the "Infrastructure" State Implementation Plan (I-SIP) requirements, requires states and delegated local agencies to submit an implementation plan to the U. S. Environmental Protection Agency (EPA) demonstrating their ability and authority to implement, maintain, and enforce each National Ambient Air Quality Standard (NAAQS).

Section 110(a)(1) addresses the submittal requirements for I-SIPs, which are due to EPA not later than 3 years after promulgation of a new or revised NAAQS. An I-SIP must be submitted regardless of whether or not a jurisdiction has any nonattainment areas.

This SIP revision addresses Clark County's authority to implement, maintain, and enforce the 2012 Particulate Matter less than 2.5 µg ($PM_{2.5}$) NAAQS within the County's jurisdiction.

Section 110(a)(2) lists the required elements that cover the I-SIP. These elements include: enforceable emission limitations, air quality modeling, enforcement programs, ambient air monitoring programs, and confirmation of adequate personnel, resources, and legal authorities. The following elements are addressed in this I-SIP:

- Enforceable Emission Limitations and Other Control Measures (110(a)(2)(A))
- Air Quality Monitoring, Compilation, Data Analysis, and Reporting (110(a)(2)(B))
- Enforcement and Stationary Source Permitting (110(a)(2)(C))
- Interstate transport provisions (110(a)(2)(D))
- Resources, Conflict of Interest, and Emergency Backstop (110(a)(2)(E))
- Stationary Source Emissions Monitoring and Reporting (110(a)(2)(F))
- Emergency Powers and Contingency Plans (110(a)(2)(G))
- Revision For Revised Air Quality Standards or New Attainment Methods (110(a)(2)(H))
- Consultation and Public Notification (110(a)(2)(J))
- Air Quality Modeling and Reporting (110(a)(2)(K))
- Major Stationary Source Permitting Fees (110(a)(2)(L))
- Consultation with Local Entities (110(a)(2)(M))

This I-SIP addresses Clark County's portion if the State of Nevada's requirement for the 2012 Fine Particulate Matter ($PM_{2.5}$) NAAQS.

CAA 110(a)(2)(A)-(M) Requirements for the Clark County Infrastructure State Implementation Plan for $PM_{2.5}$

Element (A)	Emission limits and other control measures: Requires State Implementation Plans (SIP) to include enforceable emission limits and other control measures, means, or techniques, and schedules for compliance.

The Clark County Board of County Commissioners (BCC), in accordance with Nevada Revised Statutes (NRS) Chapter 445B, has adopted the Clark County Air Quality Regulations (AQR) and has delegated enforcement authority to the Department of Air Quality (DAQ). Emission sources within Clark County are required to comply with all existing rules and regulations through federally enforceable SIP regulations.[1]

Clark County has a SIP-approved Prevention of Significant Deterioration (PSD) program, and most of the AQRs are SIP approved. A complete index of all AQRs (SIP approved and local-only) is included in Attachment B.

Several AQRs, such as Section 12.9 – Annual Emissions Inventory Requirement, Section 12.10 – Continuous Monitoring Requirements for Stationary Sources, and Section 21 – Acid Rain Permits, are local-only rules.

Section 9 - Civil Penalties and Section 10 - Compliance Schedules are part of the DAQ enforcement program.

Section 13 applies to Hazardous Air Pollutants, Section 14 applies to New Source Performance Standards, Section 28 applies to Fuel Burning Equipment, and Section 45 regulates the Idling of Diesel Powered Motor Vehicles.
Clark County will continue to implement the permitting and enforcement programs and enforce control measures with respect to the requirements in the CAA.

Nevada Administrative Code (NAC) 445B.400 – Emissions from Engines to control emissions from vehicles is applicable in Clark County.

[1] Although not a SIP rule, DAQ administers the Part 70 (Title V) permit requirements through the implementation of Section 12.5 – Part 70 Operating Permit Requirements.

Element (B)	Ambient air quality monitoring/data system: Requires SIPs to provide for establishment and operation of ambient air quality monitors, collection and analysis of ambient air quality data, and to make these data available to EPA upon request.

Clark County operates an extensive air quality monitoring network, including $PM_{2.5}$ monitors, in accordance with 40 Code of Federal Regulations (CFR) § 58. The quality control (QC) flow rate verifications and quality assurance (QA) flow rate audits meet EPA guidelines for all monitors in the network. An Annual Network Plan Report is completed and submitted to EPA as required in 40 CFR § 58.10 (Attachment A). Monitoring data is submitted to EPA through the Air Quality System. Monitoring data is also available on DAQ's website in near-real time.

Element (C)	Program for enforcement of control measures: Requires SIPs to include a program providing for enforcement of all SIP measures and the regulation of construction of new and modified stationary sources as necessary to assure that the NAAQS are achieved, including a permit program as required in Parts C and D.

AQR Section 4 - Control Officer, authorizes the Control Officer to enforce all AQRs including the following sections:

- Section 10 - Compliance Schedules;
- Section 12.1 - Permit Requirements for Minor Sources;
- Section 12.2 - Permit Requirements for Major Sources in Attainment Areas;
- Section 12.3 - Permit Requirements for Major Sources in Nonattainment Areas;
- Section 12.4 - Authority to Construct Application and Permit Requirements for Part 70 Sources;
- Section 13 - National Emission Standards for Hazardous Air Pollutants;
- Section 14 - New Source Performance Standards;
- Section 25 - Affirmative Defense for Excess Emissions Due to Malfunctions;
- Section 26 - Emission of Visible Air Contaminants;
- Section 27 - Particulate Matter from Process Weight Rate;
- Section 28 - Fuel Burning Equipment.

Other sections from the AQRs are not part of the SIP, and are therefore local-only rules that have been adopted by the BCC and are enforced by the Control Officer.

Element (D)	Interstate transport provisions: Requires SIPs to contain adequate provisions prohibiting emissions generated within the state from contributing significantly to nonattainment in, or interfering with maintenance by, any other state with respect to the NAAQS, or from interfering with measures required to be included in the SIP of any other state to prevent significant deterioration or to protect visibility.

PSD and New Source Review (NSR) provisions in Sections 12.2 - Permit Requirements for Major Sources in Attainment Areas, and 12.3 - Permit Requirements for Major Sources in Nonattainment Areas, of the AQR require an assessment of visibility impairment as part of the environmental review.

The Maximum Allowable Increases for areas designated as Class I, II, or III are defined in Section 12.2.3.

Clark County evaluated the impact of transport of $PM_{2.5}$ emissions from its sources to sensitive receptor areas in Western states, and it was concluded that $PM_{2.5}$ emissions from Clark County do not contribute to nonattainment or interfere with maintenance of the 2012 $PM_{2.5}$ standard in any other state. The analysis is included in Appendix C.

Element (E)	Adequate resources: Requires SIPs to provide necessary assurances for adequate personnel, funding, and authority under state law to carry out its SIP, to contain requirements addressing potential conflicts of interest, and to provide necessary assurances that the state retains responsibility for ensuring adequate implementation of the SIP where the state relies on a local or regional government for implementation of any SIP provision.

NRS 445B.500 authorizes Clark County, outside of tribal areas, to implement and administer air quality management programs within the geographic boundaries of Clark County. These programs are managed through the DAQ with a current air quality budget of approximately $28.7 million and 97 full-time equivalent staff positions. Primary sources of funding are:

- Permits and technical services fees collected from regulated emission sources;
- Federal grants;
- Fund distributions and grants from the Nevada Air Pollution Control Account per NRS 445B.830;
- Regional Transportation Commission (RTC) transportation tax revenue, as established by NRS 377A.090;
- Federal Congestion Mitigation and Air Quality (CMAQ) Program funds.

NRS 445B.520 gives the State Environmental Commission[2] the authority to supersede the county program.

Clark County Code Chapter 2.42 – Ethical Standards - specifies conflict of interest requirements for Clark County public officers and officials, including members of the BCC and the Control Officer. These requirements specifically prohibit all local public officials from participating in governmental decisions in which they have a financial interest.

The following provisions of state law address the requirements of CAA Sections 110(a)(2)(E)(ii) and 128:

- NRS 281A.150 (“‘Public employee’ defined”)
- NRS 281A.160 (“‘Public officer’ defined”)
- NRS 281A.400 (“General requirements; exceptions”)
- NRS 281A.410 (“Limitations on representing or counseling private persons before public agencies; disclosure required by certain public officers”)
- NRS 281A.420 (“Requirements regarding disclosure of conflicts of interest and abstention from voting because of certain types of conflicts; effect of abstention on quorum and voting requirements; exceptions”).

[2] State Environmental Commission is defined in NRS 445B.200.

Element (F)	Stationary source monitoring system: Requires SIPs to establish a system to monitor emissions from stationary sources, to submit periodic emissions reports, to correlate the emissions reports with the corresponding SIP emission limits and standards, and to make emissions reports available to the public.

The following AQR Sections provide the authority for the installation and maintenance of sampling and testing facilities to measure emissions of air contaminants and for data collection:

- Section 12.1 - Permit Requirements for Minor Sources;
- Section 12.2 - Permit Requirements for Major Sources in Attainment Areas;
- Section 12.3 - Permit Requirements for Major Sources in Nonattainment Areas;
- Section 12.4 - Authority to Construct Application and Permit Requirements for Part 70 Sources;
- Section 12.9 - Annual Emissions Inventory Requirement;
- Section 12.10 - Continuous Monitoring Requirements for Stationary Sources;
- Section 25 - Affirmative Defense for Excess Emissions Due to Malfunctions.

Sections 12.9 and 12.10 are local-only rules and have not been submitted as SIP rules.
Section 22 – Acid Rain Continuous Monitoring is a local-only rule.

Emissions data are submitted according to the Air Emissions Reporting Requirements (AERR). Emissions data are available to the public, except when the data is deemed confidential in accordance with AQR Section 12.6 and NRS 445B.570.

Element (G)	Emergency episodes: Requires SIPs to provide for authority to address activities causing imminent and substantial endangerment to public health and to provide for adequate contingency plans to implement such authority.

In accordance with NRS 445B.500(1)(d), Clark County has the authority to provide by rules and regulations for alert, warning, and emergency standards and abatement procedures relative to air pollution episodes or emergencies constituting, or likely to constitute, an imminent and substantial danger to people's health pursuant to NRS 445B.560.

Clark County has adopted AQR Section 70 - Emergency Procedures of the AQRs, which addresses emergency procedures.

AQR Section 6 - Injunctive Relief, allows Clark County to apply to a court of competent jurisdiction to enforce compliance with—or restrain violations of—any provision of the AQRs.

Element (H)	Future SIP revisions: Requires SIPs to provide for SIP revisions in response to changes in the NAAQS, or availability of improved methods for attaining the NAAQS, and in response to an EPA finding that the SIP is substantially inadequate.

Clark County must provide a method for revision of SIPs when air quality standards are revised, new attainment methods become available, or EPA informs states that current SIPs are inadequate for attaining standards or for complying with additional CAA requirements.

AQR Section 2 - Procedures for Adoption and Revision of Regulations and for Inclusion of those Regulations in the State Implementation Plan of the Clark County AQR sets forth the general procedural requirements for adoption of regulations and other materials to be incorporated in the SIP. These procedures apply to submission of:

(a) Any revision to the SIP described by 40 C.F.R. § 51.104(a);
(b) Any individual compliance schedule under 40 C.F.R. § 51.260;
(c) Any other SIP revision submitted to Nevada Division of Environmental Protection (NDEP) pursuant to 40 C.F.R. § 51.104(d).

Element (J) CAA § 121	Consultation with government officials, public notification, PSD and visibility protection: Requires states to provide a process for consultation with local governments and Federal Land Managers carrying out NAAQS implementation requirements pursuant to section 121 relating to consultation.

Clark County will continue including local governments and managers of affected federal lands in its consultation process to carry out CAA requirements. AQR Section 2 – Procedures for adoption and revision of regulations and for inclusion of those regulations in the SIP outlines the procedures for adoption and revision of regulations. The procedures include provisions for notice to the public and governmental entities and for public hearings before amending the SIP applicable to Clark County.

Element (J) CAA § 127	Requires States to notify the public if NAAQS are exceeded in an area and to enhance public awareness of measures that can be taken to prevent exceedances.

AQR Section 70 - Emergency Procedures authorizes the Control Officer to declare an episode, an alert, or an emergency if the operation of sources of air contaminants are causing or may cause imminent danger to human health.

Additionally, near-real time ambient air monitoring data for $PM_{2.5}$ is posted on DAQ's website.

Element (J)	Requires States to meet applicable requirements of part C related to prevention of significant deterioration and visibility protection.

Title I, Part C of the CAA requires provides measures relating to PSD and visibility protection. The following AQRs contain provisions for PSD areas, visibility protection, and provisions for public participation:

- Section 12.1 - Permit Requirements for Minor Sources;
- Section 12.2 - Permit Requirements for Major Sources in Attainment Areas;
- Section 12.3 - Permit Requirements for Major Sources in Nonattainment Areas;
- Section 12.4 - Authority to Construct Application Permit Requirements for Part 70 Sources;
- Section 25 - Affirmative Defense for Excess Emissions Due to Malfunctions.

Element (K)	Air quality modeling/data: Requires SIPs to provide for the performance of air quality modeling for predicting effects on air quality of emissions of any NAAQS pollutant and the submission of such data to EPA upon request.

Clark County's air quality modeling work complies with EPA's final guidance on the use of models in attainment demonstrations for the NAAQS. Clark County uses the latest methods and techniques and documents modeling information and computer model performance evaluations.

Clark County will continue to use air quality models in accordance with approved EPA and DAQ modeling guidance and protocols and will continue to submit data and modeling results to EPA as requested.

AQR Section 12.2 - Permit Requirements for Major Sources in Attainment Areas and AQR Section 12.4 - Authority to Construct Application and Permit Requirements for Part 70 Sources, provides requirements for air quality modeling.

Element (L)	Permitting fees: Requires SIPs to require each major stationary source to pay permitting fees to cover the cost of reviewing, acting upon, implementing and enforcing a permit until such fee requirement is superseded by EPA approval of a fee program under Title V of the CAA.

Permit and technical service fees are authorized under AQR Section 18 - Permit and Technical Service Fees. Section 18 includes fees for sources subject to the Title V (Part 70) permit requirements.

Clark County will continue to implement and update major stationary source permit fee regulations to comply with the requirements of CAA Sections 501-507.

Element (M)	Consultation/participation by affected local entities: Requires SIPs to provide for consultation and participation in SIP development by local political subdivisions affected by the SIP.

Clark County consults with key stakeholders on policy decisions and technical issues. NRS 445B.503 requires Clark County to consult with the Southern Nevada Regional Planning Coalition (SNRPC) and the RTC before adopting or amending a plan, policy, or program and before conducting hearings to solicit public comment.

The Air Quality Technical Advisory Committee (TAC) consists of private sector stakeholders and local government representatives and provides input on technical and policy decisions. The TAC has an opportunity to provide input on concerns, challenges, and progress in the development and implementation of air quality programs in Clark County, and also to discuss and recommend solutions to conflicts, challenges, or policy issues.

ATTACHMENT A

2014 Annual Monitoring Network Plan

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Annual Monitoring Network Plan Report

June 2014

Clark County Department of Air Quality
4701 W. Russell Road, Suite 200
Las Vegas, Nevada 89118

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

OCT 28 2014

Mr. Phil Wiker
Manager, Air Quality Monitoring
Clark County Department of Air Quality
4701 West Russell Road, Suite 200
Las Vegas, Nevada 89118

Dear Mr. Wiker:

Thank you for your submission of the Clark County Department of Air Quality's (DAQ's) 2014 Annual Monitoring Network Plan Report in June 2014. We have reviewed the submitted document based on the requirements set forth under 40 CFR 58. Based on the information provided in the plan, the U.S. Environmental Protection Agency (EPA) approves all portions of the network plan except those specifically identified below. With this plan approval, we also formally approve the following system modifications: your two proposed near-road NO_2 sites (Rancho Drive/Teddy Drive, and 4th Street/Casino Center Drive), the establishment of an "RA40" monitor at Sunrise Acres, new SLAMS $PM_{2.5}$ monitoring at Green Valley, Jean and J.D. Smith, new SLAMS O_3 monitoring at Green Valley, and the discontinuation of O_3 and CO monitoring at Winterwood. More information about these approvals is in enclosures C, D1, D2, and E.

Please note that we cannot approve portions of the annual network plan for which the information in the plan is insufficient to judge whether the requirement has been met, or for which the information, as described, does not meet the requirements as specified in 40 CFR 58.10 and the associated appendices. EPA Region 9 also cannot approve portions of the plan for which the EPA Administrator has not delegated approval authority to the regional offices. Accordingly, the first enclosure (*A. Annual Monitoring Network Plan Items where EPA is Not Taking Action*) provides a listing of specific items of your agency's annual monitoring network plan where EPA is not taking action. The second enclosure (*B. Additional Items Requiring Attention*) is a listing of additional items in the plan that EPA wishes to bring to your agency's attention.

The third enclosure (*C. Annual Monitoring Network Plan Checklist*) is the checklist EPA used to review your plan for overall items that are required to be included in the annual network plan along with our assessment of whether the plan submitted by your agency addresses those requirements. The fourth enclosure (*D. Region 9 Near-road Plan Review Checklist*) is the checklist EPA used to review those elements of your annual monitoring network plan that deal specifically with near-road NO_2 monitoring. D1 and D2 relate specifically to the Rancho Drive/Teddy Drive and the 4th Street/Casino Center Drive sites, respectively. The fifth and final

enclosure (*E. EPA approval of the site closure request for Winterwood*) documents EPA's approval of the Winterwood site closure, as requested in your letter dated September 17, 2014.

The first two enclosures highlight a subset of the more extensive list of items reviewed in the third and fourth enclosure. All comments conveyed via this letter (and enclosures) should be addressed (through corrections within the plan, additional information being included, or discussion) in next year's annual monitoring network plan. If you have any questions regarding this letter or the enclosed comments, please feel free to contact me at (415) 947-4534 or Katherine Hoag at (415) 972-3970.

Sincerely,

Meredith Kurpius, Manager
Air Quality Analysis Office

Enclosures:

A. Annual Monitoring Network Plan Items where EPA is Not Taking Action
B. Additional Items Requiring Attention
C. Annual Monitoring Network Plan Checklist
D. Region 9 Near-road Plan Review Checklists:
   D1. Region 9 Near-road Plan Review Checklist – Rancho Drive/Teddy Drive
   D2. Region 9 Near-road Plan Review Checklist – 4th Street/Casino Center Drive
E. EPA approval of the site closure request for Winterwood

cc (via email): Yousaf Hameed, DAQ

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ATTACHMENT B

DAQ SIP-Approved and Local-Only Rules

Regulation	Title	SIP or Local Only
Section 0	Definitions	SIP
Section 2	Procedures for Adoption and Revision of Regulations and for Inclusion of those Regulations in the State Implementation Plan	SIP
Section 4	Control Officer	SIP
Section 5	Interference with Control Officer	SIP
Section 6	Injunctive Relief	SIP
Section 7	Hearing Board and Hearing Officer	Local Only
Section 8	Persons Liable for Penalties – Punishment: Defense	SIP
Section 9	Civil Penalties	SIP
Section 10	Compliance Schedules	SIP
Section 12.0	Applicability, General Requirements and Transition Procedures	SIP
Section 12.1	Permit Requirements For Minor Sources	SIP
Section 12.2	Permit Requirements For Major Sources In Attainment Areas (Prevention Of Significant Deterioration)	SIP
Section 12.3	Permit Requirements For Major Sources In Nonattainment Areas	SIP
Section 12.4	Authority To Construct Application And Permit Requirements For Part 70 Sources	SIP
Section 12.5	Part 70 Operating Permit Requirements	Local Only
Section 12.6	Confidentiality	Local Only
Section 12.7	Emission Reduction Credits	SIP
Section 12.9	Annual Emissions Inventory Requirement	Local Only
Section 12.10	Continuous Monitoring Requirements for Stationary Sources	Local Only
Section 12.11	General Permits for Minor Stationary Sources	Local Only
Section 12.12	Transfer of Permit	Local Only
Section 12.13	Posting of Permit	Local Only
Section 13	National Emission Standards for Hazardous Air Pollutants	SIP
Section 14	New Source Performance Standards	SIP
Section 18	Permit and Technical Service Fees	SIP
Section 21	Acid Rain Permits	Local Only
Section 22	Acid Rain Continuous Emission Monitoring	Local Only
Section 25	Affirmative Defense for Excess Emissions Due to Malfunctions, Startup, and Shutdown	SIP
Section 26	Emission of Visible Air Contaminants	SIP
Section 27	Particulate Matter from Process Weight Rate	SIP
Section 28	Fuel Burning Equipment	SIP
Section 32	Reduction of Animal Matter	SIP
Section 33	Chlorine in Chemical Processes	SIP
Section 40	Prohibitions of Nuisance Conditions	Local Only
Section 41	Fugitive Dust	SIP
Section 42	Open Burning	SIP
Section 43	Odors in the Ambient Air	Local Only
Section 44	Prohibitions on Planting, Selling, or Offering to Sell Fruitless Mulberry and European Olive Trees	Local Only
Section 45	Idling of Diesel Powered Motor Vehicles	Local Only
Section 50	Storage of Petroleum Products	SIP
Section 51	Petroleum Product Loading into Tanks, Trucks And Trailers	SIP
Section 53	Oxygenated Gasoline Program	SIP
Section 70	Emergency Procedures	SIP
Section 80	Circumvention	SIP
Section 81	Provisions of Regulations Severable	SIP
Section 90	Fugitive Dust From Open Areas and Vacant Lots	SIP

Section 91	Fugitive Dust From Unpaved Roads, Unpaved Alleys, and Unpaved Easement Roads	SIP
Section 92	Fugitive Dust From Unpaved Parking Lots; Material Handling and Storage Yards; and Vehicle and Equipment Storage Yards	SIP
Section 93	Fugitive Dust From Paved Roads and Street Sweeping Equipment	SIP
Section 94	Permitting and Dust Control for Construction Activities	SIP

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ATTACHMENT C

Interstate Transport Analysis for the 2012 $PM_{2.5}$ NAAQS
Clark County, NV

Introduction

Section 110(a)(2)(D)(i)(I) of the Clean Air Act (CAA) requires each state to control emissions that contribute significantly to nonattainment or maintenance areas in other states with respect to any primary or secondary National Ambient Air Quality Standard (NAAQS). The Clark County Department of Air Quality (DAQ) evaluated the impact of transport of Particulate Matter less than 2.5 µg ($PM_{2.5}$) emissions from Clark County sources to sensitive receptor areas in neighboring states.

Nevada is not subject to the Clean Air Interstate Rule (CAIR) or the Cross-State Air Pollution Rule (CSAPR), however, Nevada's Department of Environmental Protection relied on the modeling work conducted by the US Environmental Protection Agency (EPA) regarding CAIR to complete the 2009 Transport SIP.

EPA's CAIR analysis identified states contributing significantly to nonattainment of $PM_{2.5}$ and ozone in adjacent states. EPA made no determinations in either rule regarding whether emissions from sources in Nevada significantly contribute to nonattainment or interfere with maintenance of the 2006 24-hour $PM_{2.5}$ NAAQS in another state, nor did it attempt to quantify Nevada's obligation.

EPA did not model $PM_{2.5}$ source apportionment for the Western states as part of CSAPR and have not done any more PM source apportionment since then[3].

DAQ used the EPA designation guidance and data[4] and the EPA 2013 Design Value Report[5] for $PM_{2.5}$ to identify receptor areas, i.e., air quality planning areas that are nonattainment or maintenance for the $PM_{2.5}$ NAAQS. DAQ also used the back trajectories[6] for several sites in California and Arizona. All wind roses are created using 2009-2012 meteorological data.

Nearby Nonattainment Areas

The monitors identified on Figure 1 violate the 2012 annual $PM_{2.5}$ NAAQS. Tables 1 and 2 list the nonattainment areas for both standards[7]; the areas are depicted on the maps in Figures 3 and 4[8]. The 2013 design values were obtained from EPA's Design Values webpage.

[3] Email from Brian Timin, 3/2/2015
[4] http://www.epa.gov/pmdesignations/2012standards/techinfo.htm
[5] http://www.epa.gov/airtrends/values.html
[6] http://www.epa.gov/pmdesignations/2012standards/hysplit.htm
[7] http://www.epa.gov/pmdesignations/
[8] http://nepassisttool.epa.gov/nepassist/

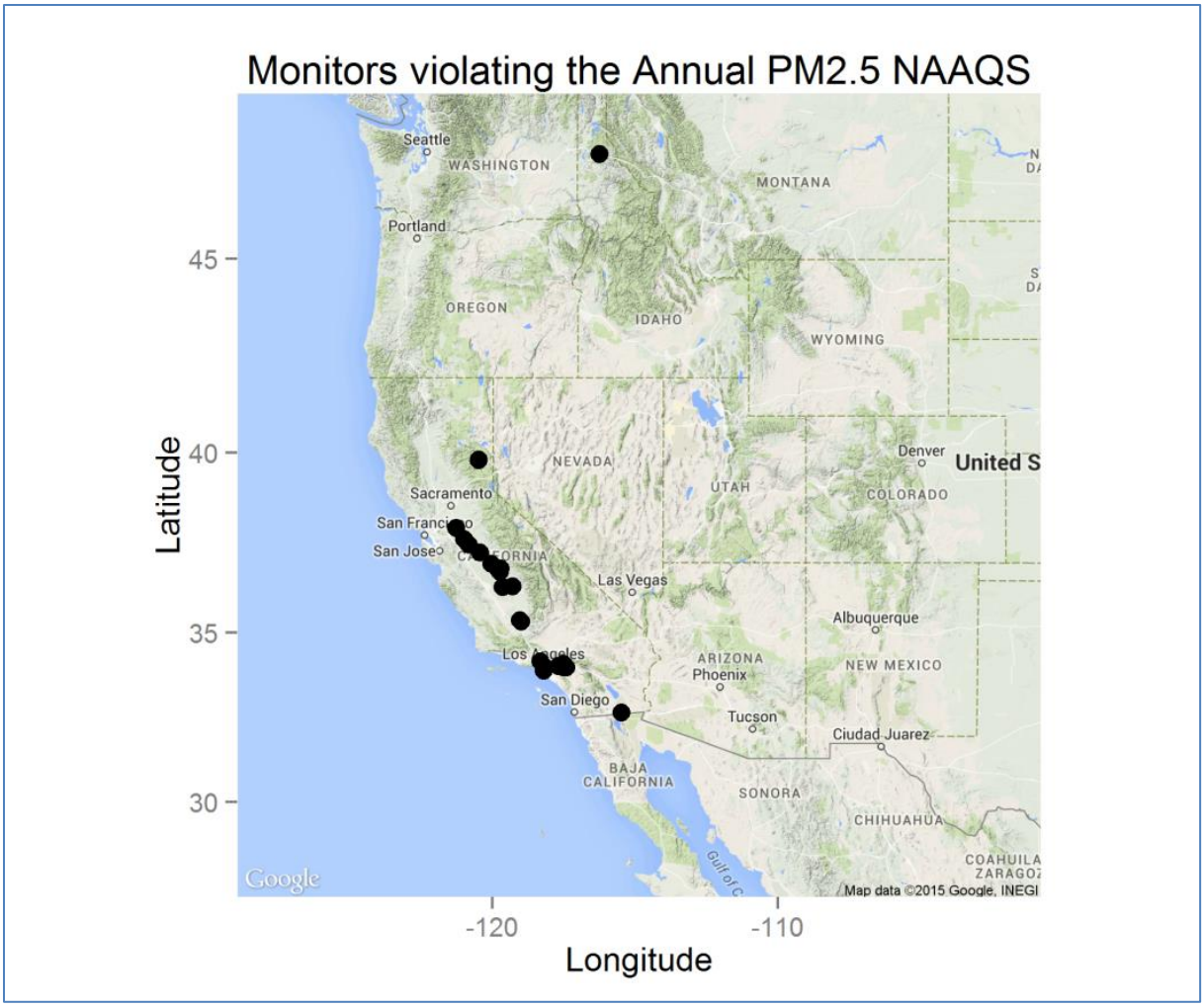

Figure 1. Monitors violating the Annual NAAQS

State	County	Receptor Type
Arizona	Pinal	Maintenance
California: *San Joaquin Valley*		
	Fresno	Nonattainment
	Kern	Nonattainment
	Kings	Nonattainment
	Madera	Nonattainment
	Merced	Nonattainment
	San Joaquin	Nonattainment
	Stanislaus	Nonattainment
	Tulare	Nonattainment
California: *Los Angeles-South Coast*		
	Riverside	Nonattainment
	San Bernardino	Nonattainment
	Los Angeles	Nonattainment
California: *Imperial County*		
	Imperial (part)	Nonattainment
California: *"Maintenance" area*		
	San Diego	Maintenance

Table 1. Areas violating the Annual NAAQS.

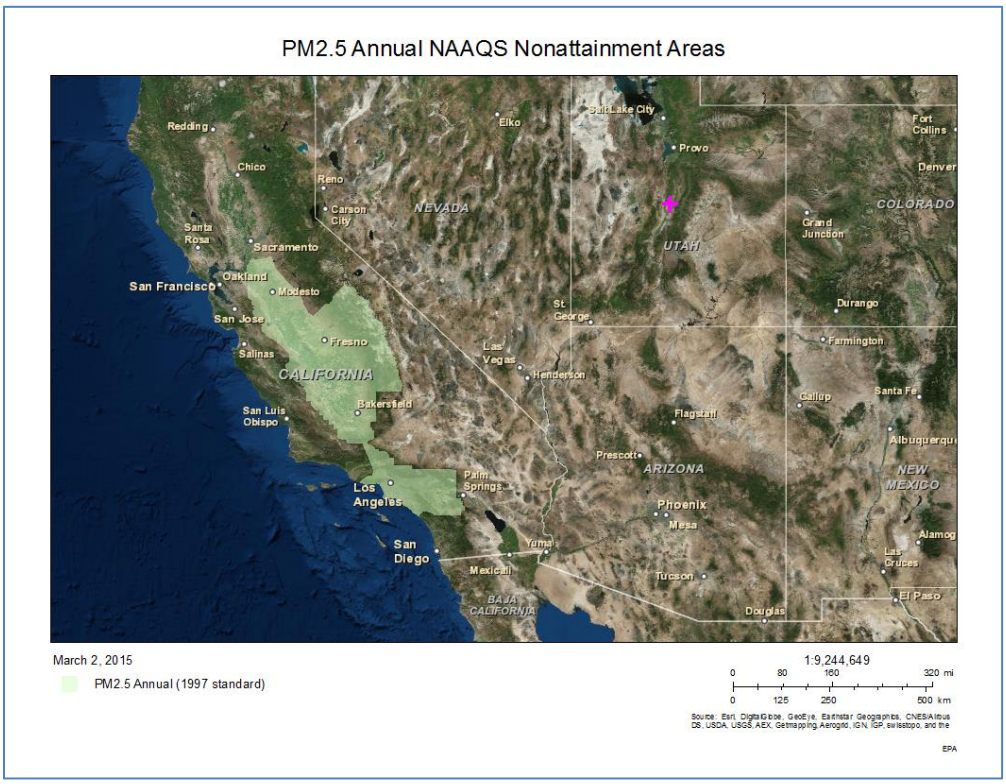

Figure 1. Annual Nonattainment Areas.

Transport to Nonattainment Receptors in Neighboring States

Prevailing winds in Clark County come from of the south to southwest; Clark County is directly downwind from California. Figure 1 shows the wind rose for 2009-2012 at the McCarran International Airport. The meteorological data shows that the prevailing winds do not blow from Nevada toward any neighboring nonattainment receptors.

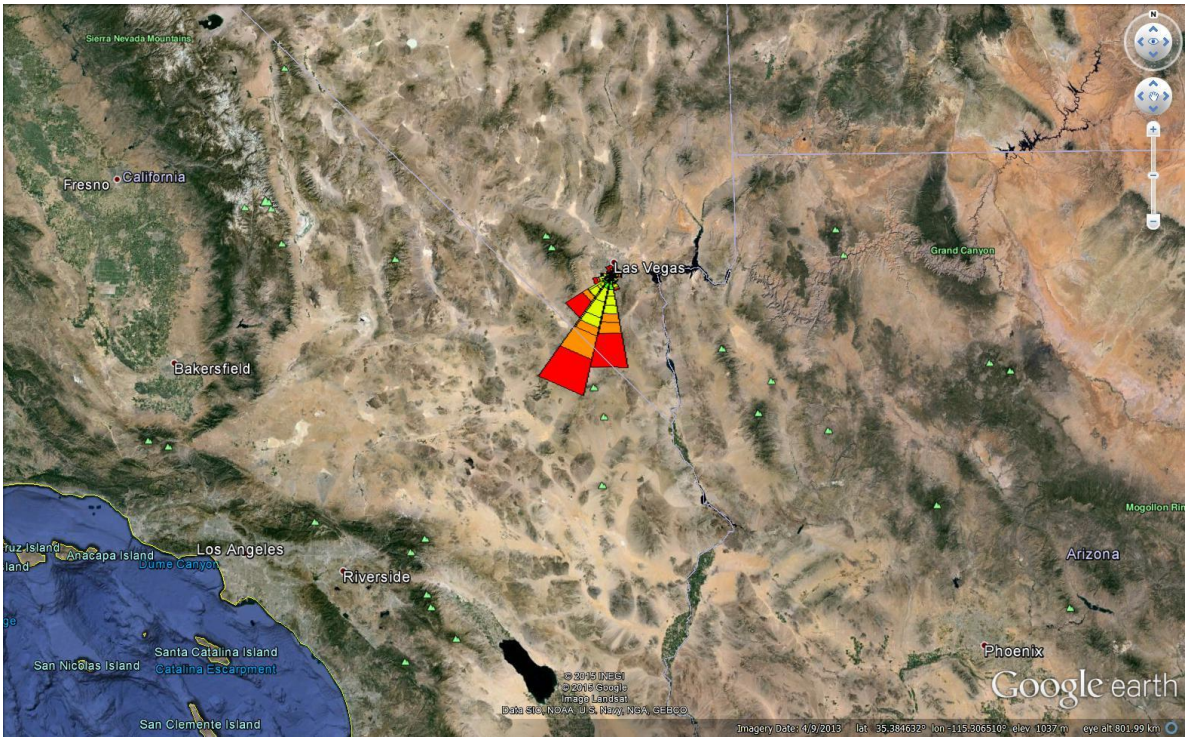

Figure 3. Wind rose at McCarran Airport, Las Vegas.

Distance is a relevant factor in the assessment of potential pollution transport; this analysis is focused on potential transport of $PM_{2.5}$ pollution from Nevada to Arizona, California and other (Eastern) states.
DAQ believes that the analyses in this section support a finding that emissions from Nevada do not significantly contribute to nonattainment of the Annual $PM_{2.5}$ NAAQS in either of these states: technical information indicating that elevated $PM_{2.5}$ levels at nonattainment receptors are predominantly caused by local emission sources.

Arizona

The area in Arizona identified as nonattainment for the NAAQS is located in Pinal County. The distance between Las Vegas and Pinal County is 290 miles (see Figure 4).

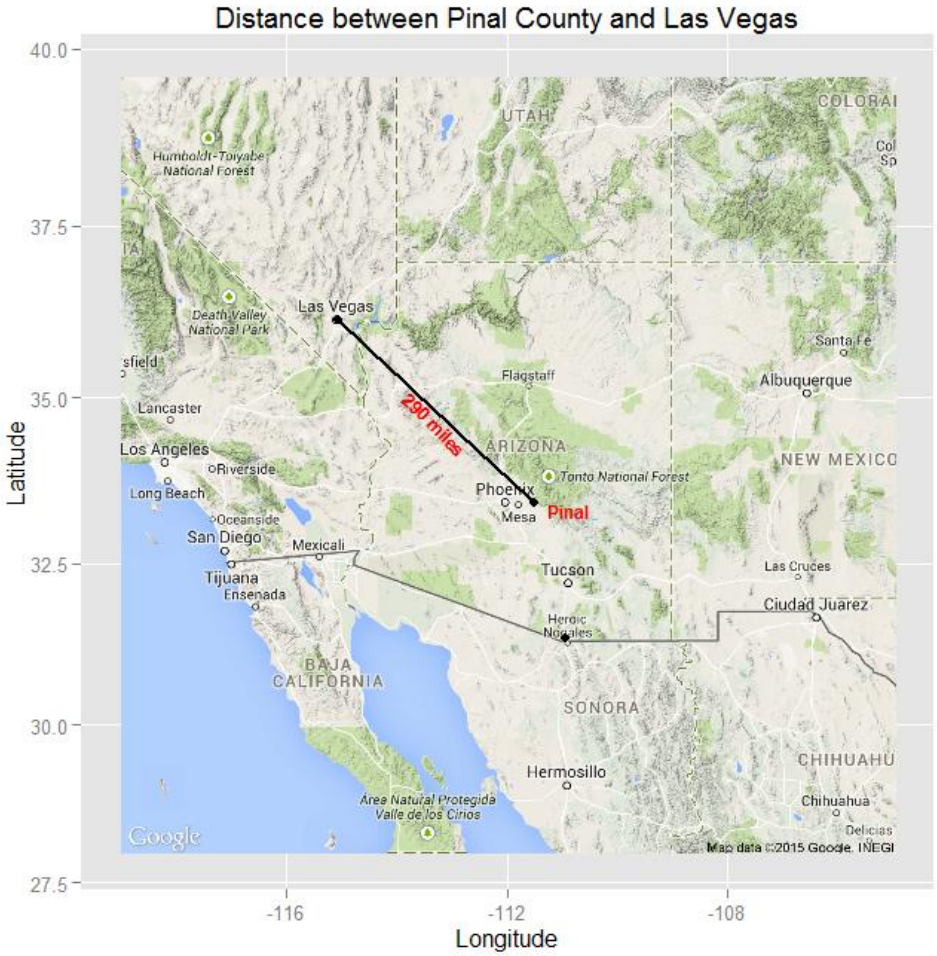

Figure 4. Distance between Pinal County and Las Vegas.

Studies over the last years showed that local (agriculture) sources significantly contribute to the $PM_{2.5}$ problem in Pinal County. The wind rose in Figure 5 shows the wind direction seems to vary a lot. The back trajectories in Figure 6 depict local contributions and some influence from Mexico.

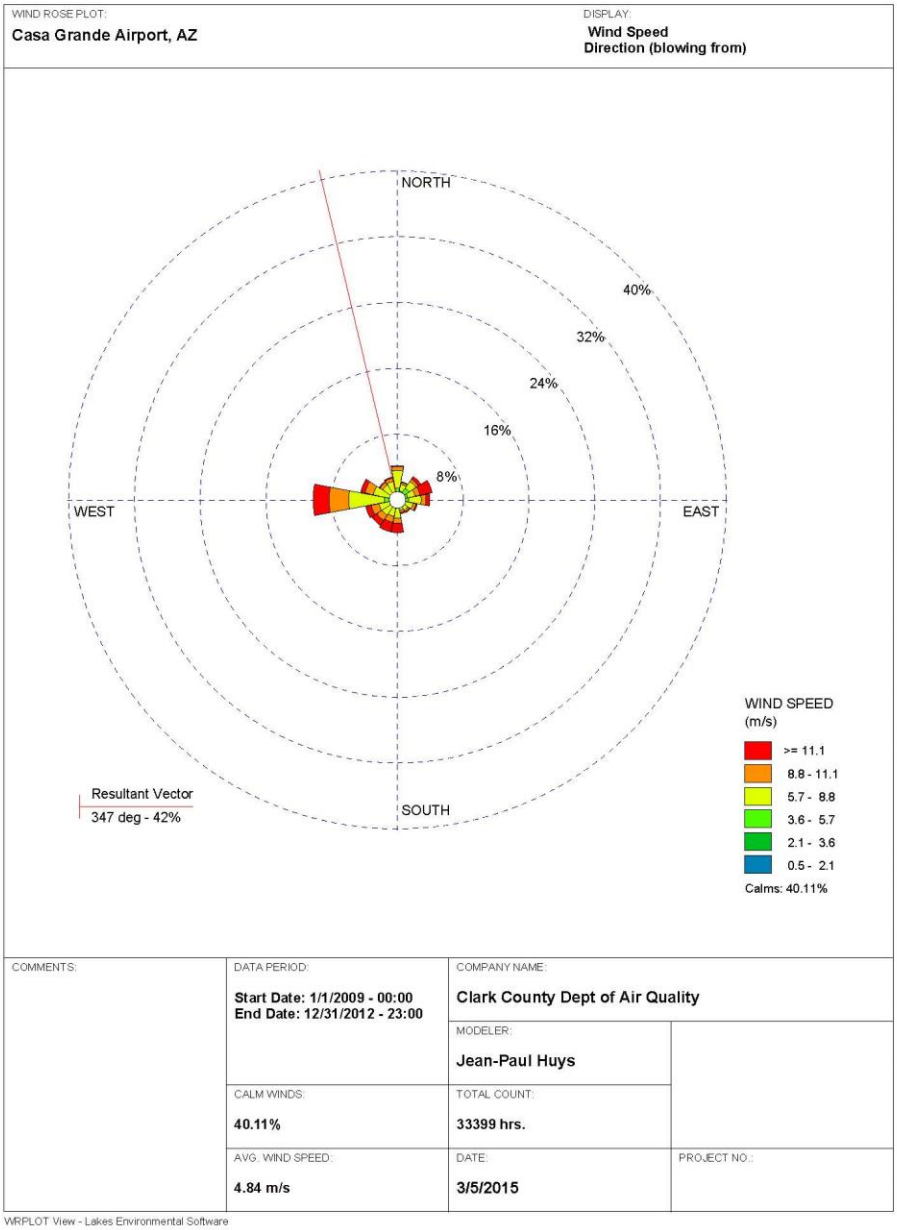

Figure 5. Wind Rose for Pinal County, AZ

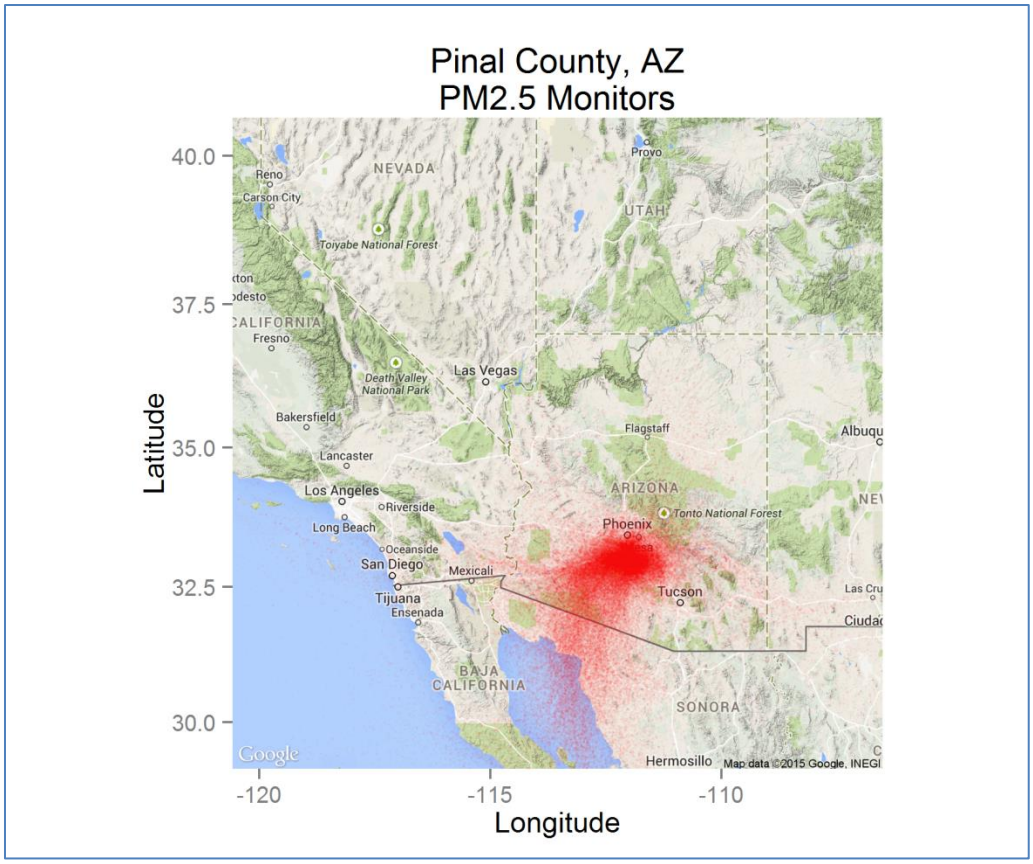

Figure 6. Back trajectories for Southern Arizona

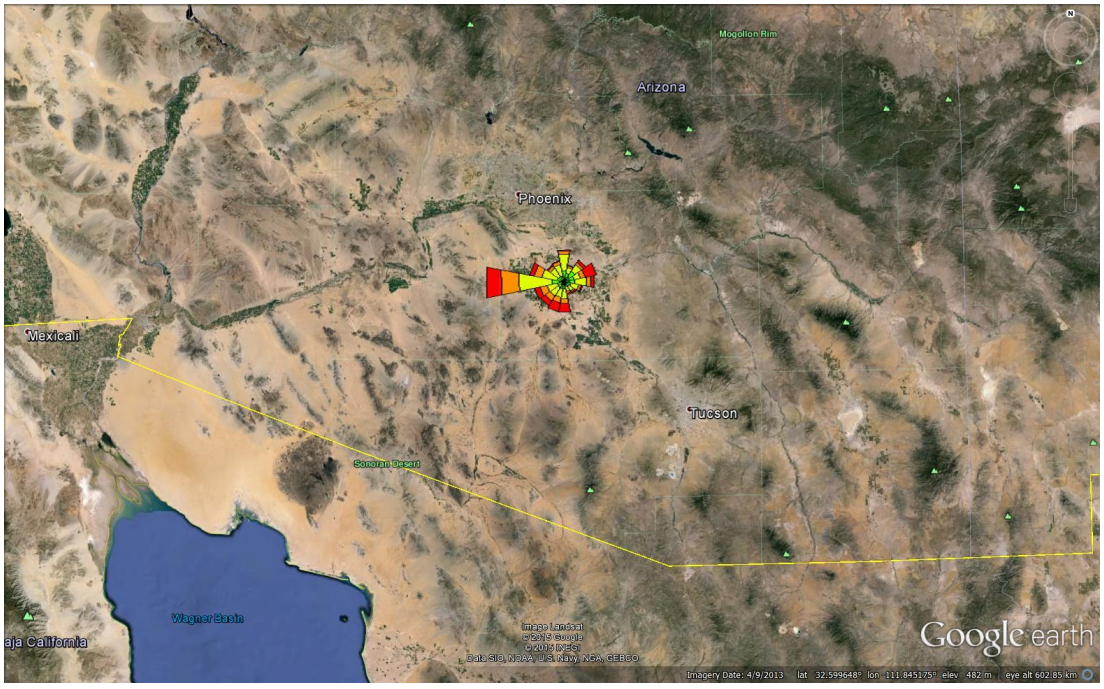

Figure 7. Wind rose for Pinal County.

California

Violations of the $PM_{2.5}$ in California are caused by emissions from wood burning devices and agricultural practices. Furthermore, there are no nonattainment areas adjacent to Clark County.
With prevailing winds out of the south to west, the California nonattainment areas are directly upwind from Nevada. The wind roses generated by EPA in Figures 8 and 9 show that the winds are coming from the west, southeast and southwest in the Los Angeles basin, while the winds are from the west in the South Coast areas.

Figure 8. Monitors in the Los Angeles area.

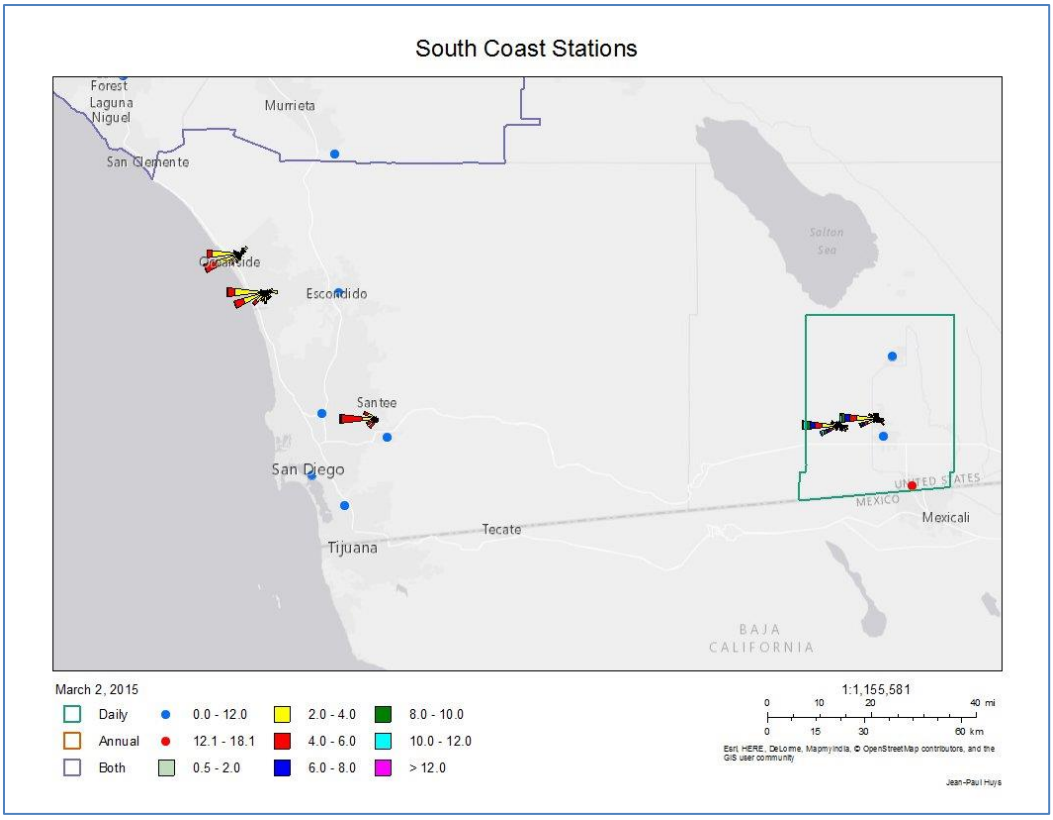

Figure 9. Monitors in the South Coast area.

DAQ used the back trajectories files from the EPA website[9], and generated back trajectories for Los Angeles County and for the San Joaquin valley. Figure 10 shows the back trajectories for the Los Angeles area. The majority of the trajectories originated along the coast or are originating from the central valley. Figure 11 shows the back trajectories for the San Joaquin valley. Both figures show that Clark County does not have any impact on the nonattainment areas in California.

[9] Data from http://www.epa.gov/pmdesignations/2012standards/hysplit.htm

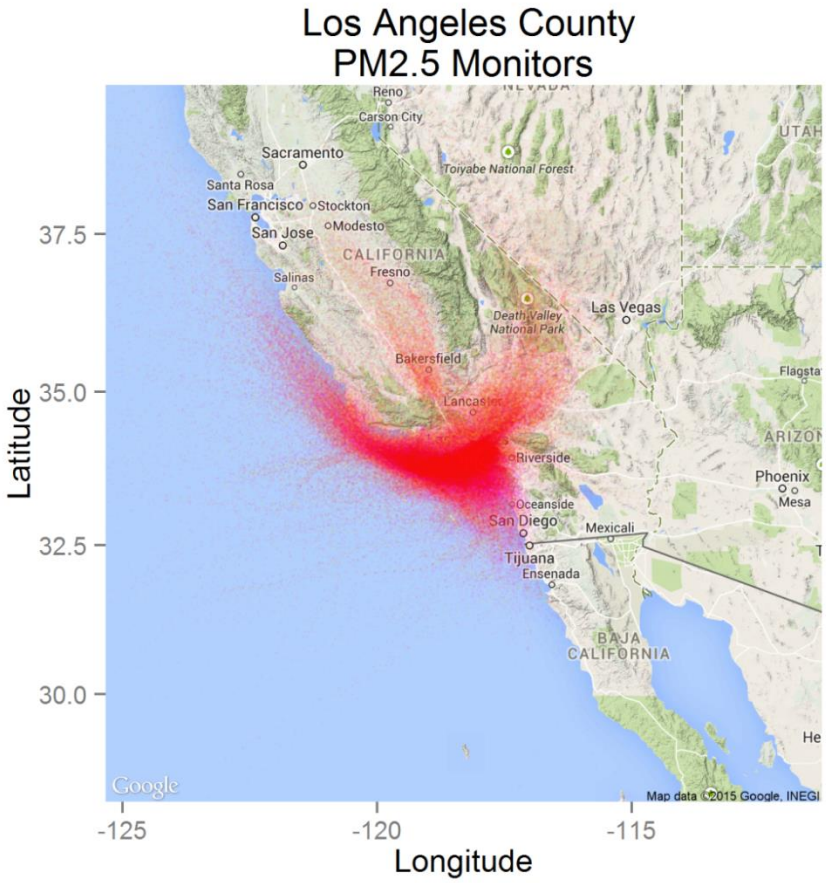

Figure 10. Back trajectories for Los Angeles County.

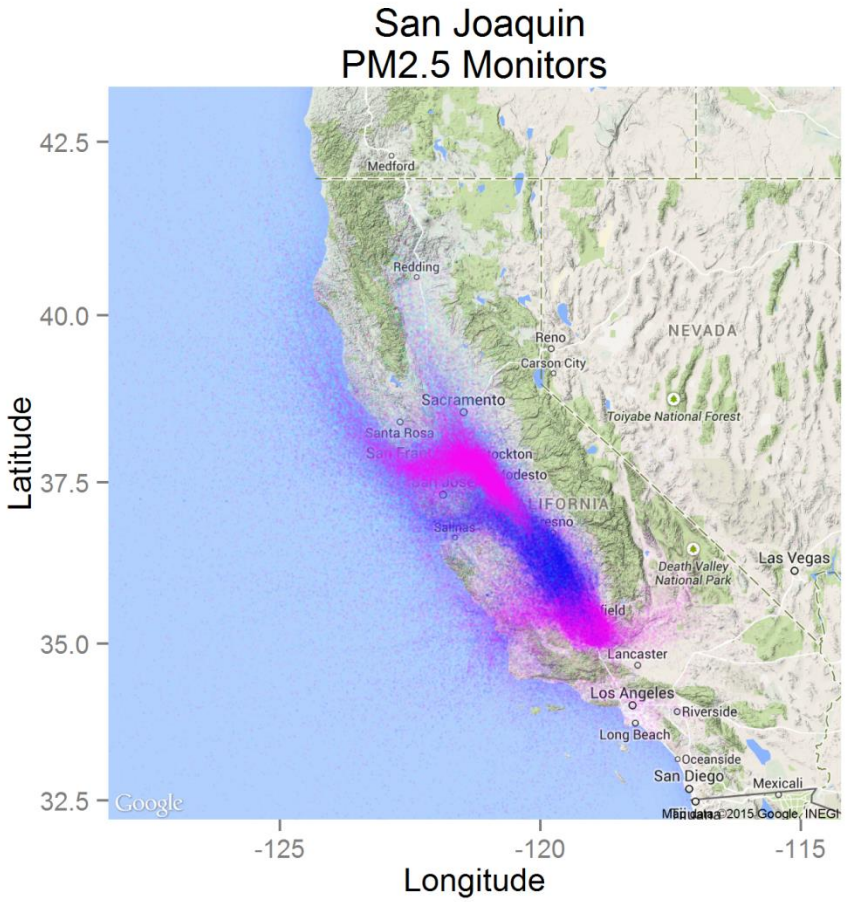

Figure 11. Back trajectories for the San Joaquin valley.

Transport to nonattainment/maintenance receptors in other States.

DAQ believes that the following factors support a finding that emissions from Clark County sources do not significantly contribute to nonattainment or interfere with maintenance of the 2012 Annual $PM_{2.5}$ NAAQS: (1) the relatively small magnitude of the emission inventory of $PM_{2.5}$ precursors in Clark County combined with (2) the relatively long distance between the nearest portion of Clark County to Shoshone County, ID to the North, and the long distance from Clark County to the nonattainment areas in the Eastern States, DAQ believes that these factors also support a finding that emissions from Clark County sources do not contribute significantly to nonattainment or interfere with maintenance of the 2012 Annual $PM_{2.5}$ NAAQS at any of the other CSAPR receptors.

Conclusion

DAQ reviewed relevant technical information to evaluate the potential for Clark County emissions to contribute to nonattainment areas of the $PM_{2.5}$ NAAQS at specified monitoring sites in the neighboring and other states. Geographic distance and topography are relevant factors in assessing potential transport, therefore, DAQ looked at information related to potential transport of $PM_{2.5}$ pollution to states bordering Clark County that have nonattainment receptors: Arizona and California. Technical information and reports indicate that elevated $PM_{2.5}$ levels in nonattainment areas are predominantly caused by local emission sources, either smoke from woodstoves or agricultural practices. According to the HYSPLIT back trajectories, some receptors in southern California and southern Arizona are impacted by international transport from Mexico. Wind data and wind roses (2009-2012) show the prevailing winds (and pollution) at the receptors do not come from Clark County.

DAQ did not examine the nonattainment receptors in more distant western states because of the geographical distance between Clark County and the receptors, and the fact that technical information indicates that the elevated $PM_{2.5}$ concentrations are caused by localized sources.

DAQ concludes that Clark County does not contribute to nonattainment areas or interfere with maintenance of the 2012 $PM_{2.5}$ NAAQS, therefore satisfying Section 110(a)(2)(D)(i)(I) of the Clean Air Act.

ATTACHMENT D

Public Participation

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A. 30-day Public Comment Period Notification

Newspaper notification

DAQ webpages notifications:

B. Public Comment Report

Public Notice: *Las Vegas Review-Journal,*
Public Comment Period:

Formal Comments Received: None

Public Hearing:
Formal Comments Received: None

C. Board of County Commissioners Meeting –

D. Board of County Commissioners Meeting –